ATM LOCATOR APPLICATION

Abstract

- This project aims at building mobile or desktop application for banking user to find nearest Branch ATM based on search criteria .

ATM locatorapp provides exact location of ATMs of North Macedonia on Google map of android devices,IOS devices and Windows devices.

Introduction

- GPS(Global Positioning System) is a service offered by Google.
- Global Positioning System tracks the location and provides information of nearby points of interest.
- This web application uses GPS to determine the location of ATMs then displays them on Google map.
- Distances and directions are provided for each branch/ATM.

Existing System

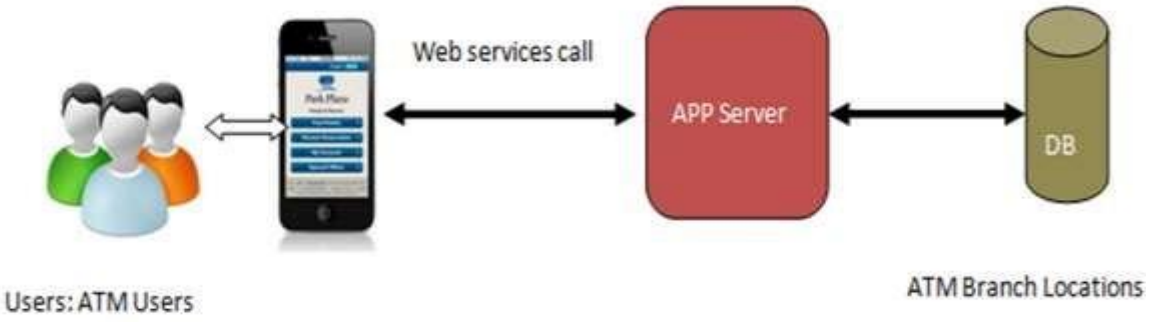
- Most of the ATM locaters are specific to the Banks.

Limitations:

- Every bank has its own application which displays the location of the Particular Bank’s ATMs only.
- User cannot get Appropriate ATM of choices.

Proposed System

- Google Maps are used to check and extract the global co-ordinates of Automatic teller machines in a given radius.
- Using yourself as the centre and supplying the application with a radius, the application should list and show all the available ATMs in ascending order of the distance from you.
- On selecting a particular ATM it should show the route from user's current location to selected ATM.



Software and hardware requirements

Software requirements:

- Operating System**:** Windows 7/8.1/10 ,Linux
- Programming Language**:** Java, HTML5,Javascript
- Online Services **:** GPS

Hardware requirements:

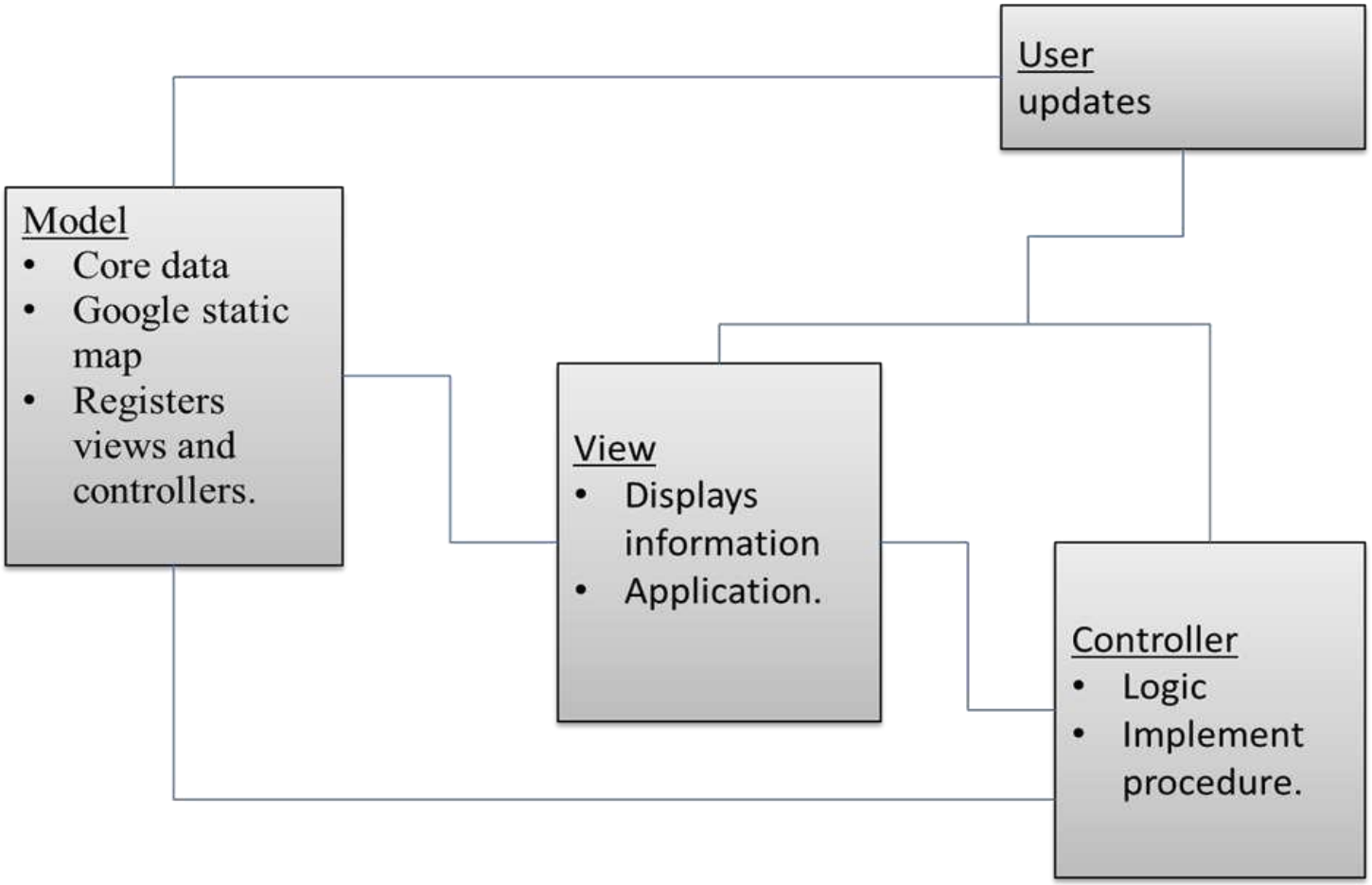
- PC with 20 GB hard-disk and 2 GB RAM.

Design

- This Mobile application helps banking user to find nearest ATM based on search criteria (Ex: Distance,or name of the bank). The app finds the nearest ATM based on the phone's GPS or computers current location. It gives distance and directions so we know how to get to the ATM machine.

- Heart of the design lies in structuring the:
  1. System Architecture
  2. User Interface design

System architecture



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- Our application is based on the standard MVC architecture.
- Three major components include :

Model:

It refers to the database or the static data.

Core functionality is included in the model part.

In our application Google Maps serves as a database.

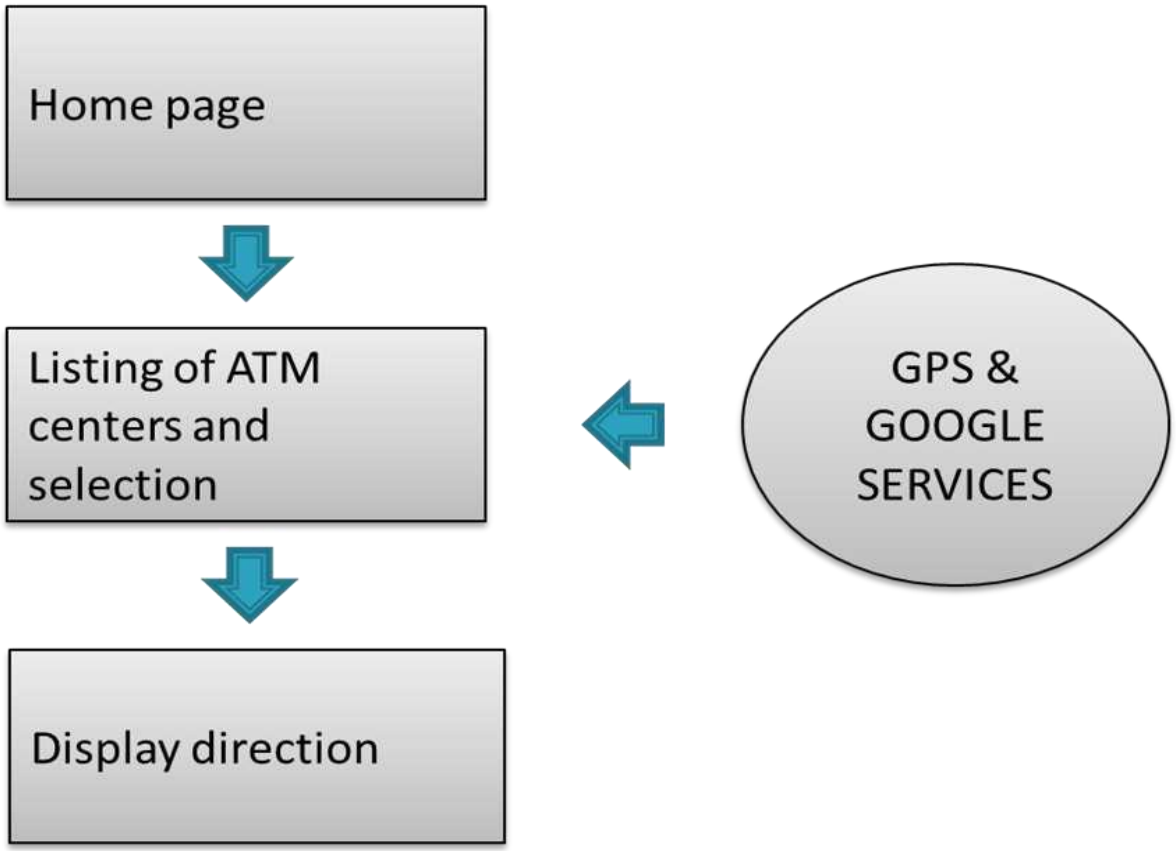
View:

.It displays information to the user i.e. it assist the user about the actions to be performed.

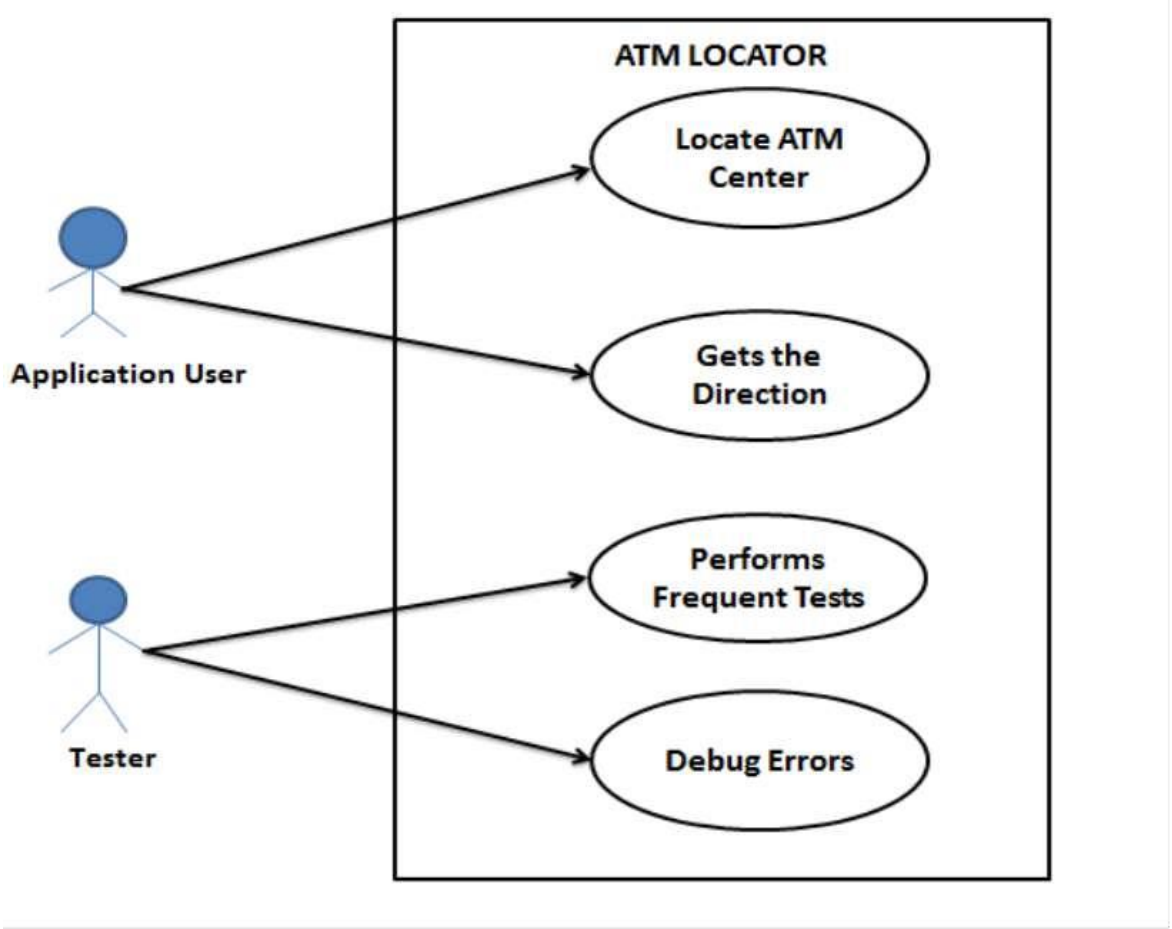
Controller:

the implementation logic of how all the modules serve the purpose are contained in the controller.

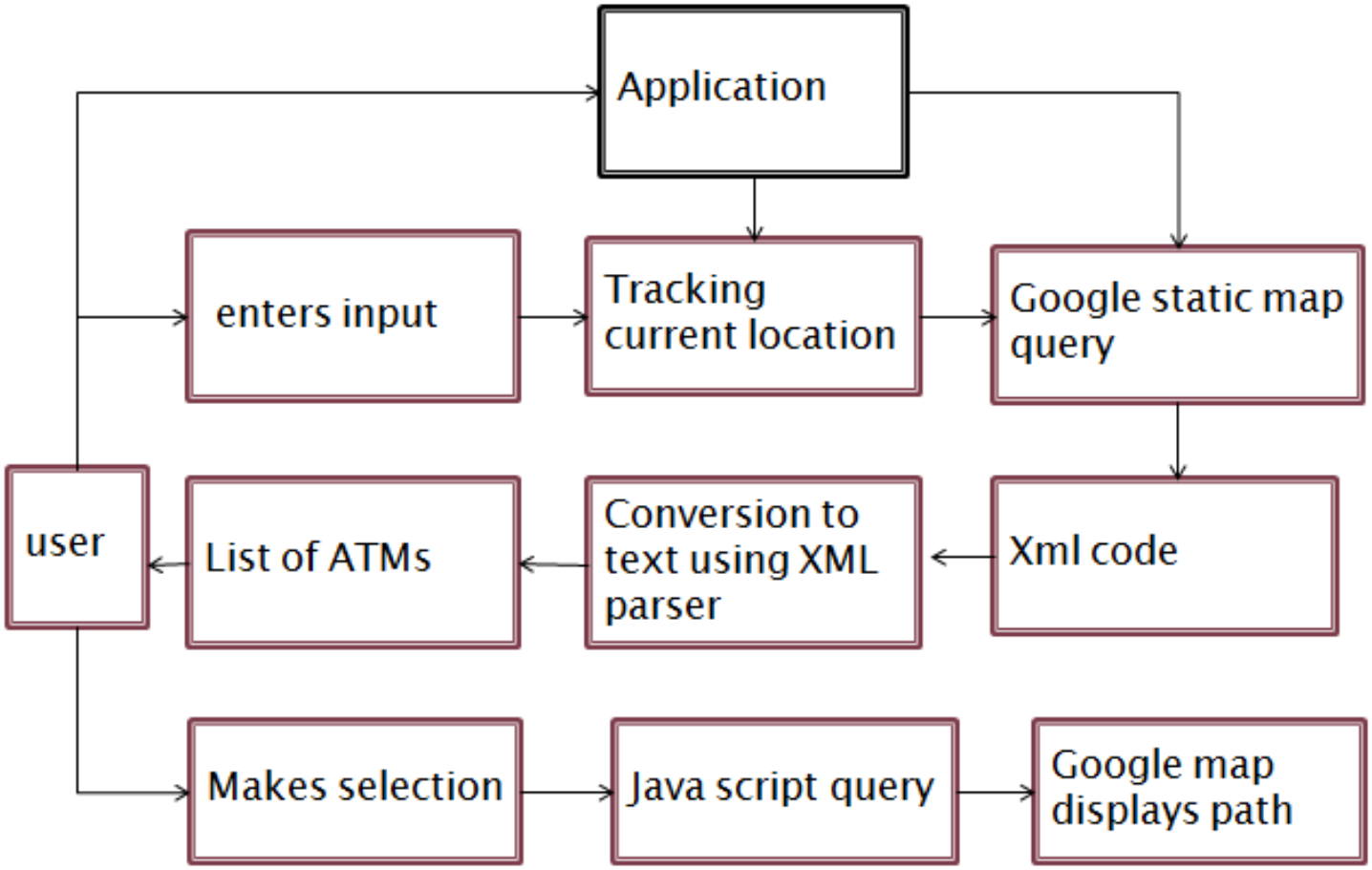
UI Design


Home page
Listing of ATM centers and selection
Display direction
GPS & GOOGLE SERVICES

Use Case diagram



Data flow diagram



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- Data flow diagram is a graphical tool used to describe and analyze the flow of data through a system either manually or automated - including the processes, storing of data, and delays in the system.
- User enters the input.
- Application tracks the location using GPS.
- Google static map query is sent along with the key generated.
- The result of the query will be in the form of xml code.
- Xml parser is used to convert this xml code into text.
- User makes a selection.
- The path to the selected ATM is is displayed on the google map.

Implementation

- All ATM users would interact on Mobile via activities
- Minimal data is locally stored on Mobile SQL Lite database, otherwise data is fetched from App server which in turn fetches the data from database
- Services on App server are called via Web services
- Users would see the ATMs on map using Google Map

- Three basic modules of our application includes:
  1. Profiling module
  2. listing and selection module
  3. path display module

Profiling module

- The first view of our application is an edit box with a submit button asking for input from the user.
- User enters the input and then clicks on the **show ATM** button.
- Suppose the user enters the radius as 0,an error message is displayed saying **invalid input.**

Listing and selection module:

- When the user enters the input, GPS tracks the latitude and longitude values of the ATM centers falling within the range.
- These values along with the key to access the google services is sent as a query to the google static maps.
- Xml parser is used to convert the result of the query into text.
- Now, list of the ATM centers are visible to the user and he is free to select any from the list.

Path display module

- When the user makes a selection, java script query is sent to establish the path from the user current location to the selected ATM.
- The established path is then displayed on the google map of the android device.
- A Line represents the path from the users current location to the selected

Conclusion

We hereby create an application to work on android devices that locates the nearest ATM or the list of ATM centers over specified distance.

The application developed would be of great use for all the banking users to find their nearest ATM’s in the sense that they can reduce their work of searching for the ATM’S nearby

This application gains importance in the sense that it is not specific to a particular ATM instead it locates and lists out all the ATM’s within the given limit of radius.